EXHIBIT F

[redacted]

[redacted]

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

TQ DELTA, LLC,

Plaintiff,

v.

COMMSCOPE HOLDING COMPANY, INC., COMMSCOPE INC., ARRIS INTERNATIONAL LIMITED, ARRIS GLOBAL LTD., ARRIS US HOLDINGS, INC., ARRIS SOLUTIONS, INC., ARRIS TECHNOLOGY, INC., and ARRIS ENTERPRISES, LLC,

Defendants.

C. A. No. 2:21-cv-310

[redacted]

Corrected Expert Report of Jonathan D. Putnam

Jonathon D Putnam

September 3, 2022

JONATHAN D. PUTNAM **September 3, 2022**

[redacted]

such) must offer non-discriminatory royalties to all defendants, I do not specialize my opinions regarding the royalty rate itself to any individual defendant. I treat standard-essential technology as a common input for which all industry participants must pay on similar terms. These terms are determined in a market upstream from the accused standard-compliant devices, much as jet fuel is a common input for which all airlines pay on similar terms, at a price determined in a market upstream from airline travel.

C. DAMAGES

15. As courts have recognized,[4] the F/RAND context necessitates certain modifications to the standard *Georgia-Pacific* framework for determining a reasonable royalty. These modifications de-emphasize, or eliminate, certain of the *Georgia-Pacific* factors, such as the "patentee's licensing policy" (factor 4), as well as factors that are idiosyncratic to the accused infringer (such as the profitability of an individual accused product (factor 6)), while giving primacy to other factors that are common to standards implementers as a whole, such as their gains from the use of standardized technology, and the patentee's portion of that gain (factors 12 and 13).[5]

16. In the F/RAND context, where the employment of such factors must yield non-discriminatory results, the calculations necessary to implement them depend on the "facts of the case," which are, in fact, common across multiple cases. I

[4] *Microsoft Corp. v. Motorola, Inc*., 696 F.3d 872, 884 (9th Cir. 2012) ("*Microsoft v. Motorola*"); *In re Innovatio IP Ventures, LLC Patent Litig*., MDL No. 2303, 2013 WL 5593609, at *4 (N.D. Ill. Oct. 3, 2013) ("*Innovatio*").
[5] *Innovatio* at *6, *12, *37-38.

[redacted]

24. [redacted]

B. SEPs VS. NON-SEPs

25. I understand that TQ Delta does not allege that some of the Asserted Patents are essential to any DSL standard ("non-SEPs"). Specifically, I understand that Family 3 and Family 9a are not "technically essential." However, because (a) TQ Delta alleges that the other families in its portfolio are essential to DSL, (b) these non-SEP families would be licensed as part of the larger SEP portfolio, and (c) TQ Delta has pledged to license its portfolio on "reasonable" and "non-discriminatory" terms, I employ methods that value the portfolio of SEPs and non-SEPs as a whole, which is the form in which it is offered and licensed in the marketplace. Patent-by-patent valuation or family-by-family valuations are artificial impositions caused by the procedural constraints of litigation. I have, of

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course, complied with those procedural constraints by permitting the jury to determine damages patent-by-patent or family-by-family.

26. I observe that TQ Delta's F/RAND commitment extends only to patents that "are essential."[14] Therefore, if the Family 3 and Family 9a patents are not essential to a DSL standard, then TQ Delta is not bound by any FRAND commitment.

27. I further understand that while these inventions are not technically essential to the standards, they are commercially essential. In other words, if most manufacturers implement the claimed technology, the cost to switch to a different implementation may be high. In addition, for optional parts of the standard (which I understand is the situation with the Family 2 patents), the invention's value derives from the option to use the invention, under particular circumstances.[15] [redacted] Thus, as with fire

[14] "Patent Statement and Licensing Declaration," International Telecommunication Union, June 26, 2015, p. 2. In other contexts, this definition is refined to mean patents that "are or become, and remain essential." Annex 6 – Appendix A: IPR Licensing Declaration forms. ETSI Rules of Procedure, November 19, 2014.

[15]

> Furthermore, with some inventions, say for example a method of detecting fires, value is added simply by having the patented invention available for use. [Citing Hanson v. Alpine Valley Ski Area, Inc., 718 F.2d 1075, 1080-81 (Fed. Cir. 1983)] (approving a reasonable royalty not based on "actual use of the snowmaking machinery" but on what a party would have paid to have the machine available to use). Thus, potential licensors and licensees routinely agree to royalty payments regardless of whether the invention is used frequently or infrequently by the consumer.

Id.

[redacted]

extinguishers and similar options, under these facts the frequency of use does not impact the utility derived from the invention or one's willingness to pay for it.[16]

28. [redacted]

C. FRAND ISSUES

29. Implementers in SEP litigation typically provide a restatement of generic concerns about the supposed dangers of patent hold-up, royalty stacking, and a litany of other potential ills related to the licensing of SEPs, which they allege may produce inflated royalty rates. In general, I reserve my response to expert evidence that the Defendants may submit in support of any such claim to a future report. In the present report, however, I make some general observations:

[16] I understand that the VDSL2 functionality in Family 6 is an optional part of the standard; if a product uses G.vector with VDSL2, however, that optional functionality in VDSL2 becomes mandatory. Defendants chose to include Family 6 functionality in their devices, even though it was not mandatory to do so (thus it must have been worth it to do so). [redacted]

[17] I understand Family 9a applies to G.inp. However, Family 9b is essential to G.inp. To avoid double-counting, I do not count Family 9a as a distinct G.inp family. Thus, the total number of G.inp families is still 3. In the technical appendix and in Exhibit 21, [redacted]